

REMARKS

Claims 1-7 and 16-20 are pending in the present application. Claims 1 and 16 have been amended. Claims 4 and 18 have been canceled with this amendment. No claims have been added with this amendment. Therefore, claims 1-3, 5-7, 16, 17, 19, and 20 will be pending in the application after entry of the foregoing claim amendments. Support for the amendments is found in the specification, drawings, and claims as originally filed. Specifically, support is found in the published specification at ¶¶ 17 and 53. Applicants respectfully submit that no new matter has been added.

Interview Summary

Applicants gratefully acknowledge the time and attention afforded by Examiner Anderson during a telephonic interview on October 20, 2009. The Examiner stated that the proposed amendment may lack support in the specification in regard to the claimed feature of a “relevant subset of data.” The Examiner further stated that the cited portions of the references may disclose the proposed features and that other portions of the cited references may also disclose the proposed features. Applicants herewith submit revised amendments, which Applicants believe overcome the cited references and address the Examiner’s remarks made during the telephonic interview.

Claim Rejections – 35 U.S.C § 103

Claims 1-3, 5, 7, 16, 17, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pub. No. 2003/0195762 (hereinafter “Gleason”) in view of U.S. Pat. No. 7,124,145 (hereinafter “Surasinghe”). Applicants respectfully traverse the rejections. Although Applicants believe that the present claims patentably define over Gleason in view of Surasinghe, Applicants have amended the claims to further clarify the claimed subject matter.

The cited portions of Gleason and Surasinghe fail to disclose or suggest the specific combination of claim 1. For example, the cited portions of Gleason and Surasinghe fail to disclose or suggest that the computer constructs a query to evaluate at least one of the business rules, the query generated within a rules runtime after relevant data has been

determined and brought into a memory of the rules engine, wherein the query is constructed and executed during execution of the workflow and is optimized to retrieve only data needed for query execution, as recited in claim 1.

Support for the amendment to claim 1 is found in the specification, which in this regard discloses the following.

Another embodiment of the invention includes a delayed query execution mechanism where database queries may be constructed and executed during execution of the workflow process to further the efficiency of the workflow, in order to only use the relevant data from large data-sets that are pertinent to rule evaluation over the workflow state.

(Specification, ¶ 17)

The delayed/optimized query may be implemented by constructing a query statement, such as a SQL query, in the policy that is being executed on the workflow process state. The query is considered delayed because the statement is generated at the last possible moment in the rules runtime to ensure that incoming data is well-known before the query statement is completed. This delayed query construction timing ensures that the query statement is generated for efficient execution, can succeed based on the incoming data, and is optimized to retrieve and search only the relevant data needed so as to reduce the time for query execution and reduce the need for additional secondary queries.

(Specification, ¶ 53)

The Office Action mailed on August 4, 2009 (Office Action) states that Gleason “is silent on the computer constructing a delayed query to evaluate at least one of the business rules, the query delayed in the workflow process such that the query is executed over a data set smaller than a full size data set whereby a time-efficient query results.” Instead, the Office Action relies on U.S. Pat. No. 7,174,342 (hereinafter “Scheurich”) as disclosing this feature. See Office Action, page 10, ¶6. Although Applicants believe that the present claims patentably define over Gleason in view of Scheurich in this regard, Applicants have amended the claims to further clarify the claimed subject matter.

The cited portions of Scheurich disclose the following.

Some of the data may be periodically unavailable, obsolete, or busy. When asked to run a query, the query executing software can delay the query or re-schedule it for a more appropriate time so that the query results will be more complete.

(Scheurich, col. 13, lines 13-17).

However, a thorough reading of the cited portion makes clear that Scheurich fails to disclose constructing a query to evaluate at least one of the business rules, the query generated within a rules runtime after relevant data has been determined and brought into a memory of the rules engine, wherein the query is constructed and executed during execution of the workflow and is optimized to retrieve only data needed for query execution, as recited in claim 1. Rather, Scheurich discloses a delay or rescheduling when data is unavailable, obsolete or busy. Scheurich fails to disclose or suggest constructing the query within a rules runtime after relevant data has been determined and brought into a memory of the rules engine. Further, the cited portions of Scheurich fail to disclose or suggest that the query is constructed and executed during execution of the workflow and is optimized to retrieve only data needed for query execution.

Moreover, the additional portions of Scheurich, referenced and discussed during the telephonic interview, likewise, fail to disclose or suggest these features of claim 1. In this regard, Scheurich discloses the following.

The technologies described herein are particularly useful in that they can be combined to create a system that can be constantly refined and revised to address changing conditions and new insights. For example, the system supports automatic periodic execution of sequences. When a recipient receives the results of a sequence, interim processing can be investigated to refine and revise the sequence processing. Upon the next execution of the sequence, more relevant or useful information can be provided.

A general illustration of such an arrangement 1002 is shown in FIG. 10. At 1022, a query cycle is run on a data collection. Then, at 1032, the resulting information is subjected to an analysis cycle. The resulting information is then delivered at 1042. Refinements to the processing can be done at 1052. Accordingly, the next query cycle incorporates the refinements, if any.

In many cases, the person most knowledgeable about which parameters should be adjusted is a non-technical user. In scenarios utilizing templates, such a non-technical user can change the parameters easily via a user interface without regard to the

technical details underlying querying, analysis, and delivery. In this way, non-technical users can become quite skillful in controlling the flow of information to them.

Example 7

Query Directives

A discrete executable query directive is a processing directive that can perform a query and provide a result set. As described above, the query directives supported by a system can range from simple to complex.

Examples of query functions supported include filter operators (e.g., >, <, !=, "in" and the like), run on refresh (e.g., to specify the query is to be run whenever the table is refreshed), grouping (e.g., "SUM" and the like). Typically, a query is specified by designating appropriate columns and appropriate filters. A wide variety of other approaches are possible for queries.

The logic required to implement a rich set of queries can be quite involved. Accordingly, software for executing an instance of the query directive can handle the technical details related to queries. The executing software can serve as an abstraction layer so that users creating queries need not be concerned with the underlying structure of the data collection and how it is accessed. In this way, a generic set of instructions for gathering a data set can be converted into specific instructions appropriate for a particular data collection. The query directives can draw information from any type of source system, such as an On-Line Transaction Processing (OLTP) system or a data warehouse system.

(Scheurich, col. 11, line 56-col. 12, line 37)

These portions of Scheurich disclose a process of analyzing query results to obtain refinements to be used in a subsequent query cycle. These portions of Scheurich further disclose that the query may designate appropriate columns and filters that are more appropriate for a particular data collection. However, these portions still fail to disclose or suggest that the computer constructs a query to evaluate at least one of the business rules, the query generated within a rules runtime after relevant data has been determined and brought into a memory of the rules engine, wherein the query is constructed and executed during execution of the workflow and is optimized to retrieve only data needed for query execution.

Thus, the cited portions of Scheurich fail to remedy the defects of Gleason in this regard. The cited portions of Gleason and Surasinghe, therefore, alone, or in combination

with Scheurich fail to disclose or suggest this feature of claim 1. Therefore, claim 1 is allowable for at least the reasons noted above.

Claims 2, 3, 5, and 7, depend from claim 1, which Applicants have shown to be allowable. Accordingly, claims 2, 3, 5, and 7, are also allowable, at least by virtue of their dependence from claim 1.

The subject matter of claim 1 discussed above is similarly recited in independent claim 16. Therefore, claim 16 is allowable for at least the same reasons as claim 1.

Claims 17, 19, and 20 depend from claim 16, which Applicants have shown to be allowable. Accordingly, claims 17, 19, and 20, are also allowable, at least by virtue of their dependence from claim 16.

Claims 4 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleason in view of Scheurich. Claims 4 and 18 have been canceled with this amendment, thus rendering the rejections moot. The subject matter of claims 4 and 18, with clarifying modifications, has been incorporated into independent claims 1 and 16, respectively. As discussed above, the cited portions of Gleason and Scheurich fail to disclose the features of claims 1 and 16.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleason in view of “An operational approach to the design of workflow systems” (“Agarwal”). Claim 6 depends from claim 1, which Applicants have shown to be allowable over Gleason. Agarwal was cited in the Office Action as allegedly disclosing utilizing at least one declarative if/then statement. See Office Action, page 12, ¶ 2. Applicants respectfully submit that the cited portions of Agarwal fail to remedy the deficiencies of Gleason as discussed above. Accordingly, claim 6 is also allowable, at least by virtue of its dependence from claim 1.

Accordingly, Applicants respectfully submit that claim 6 patentably defines over Gleason and Agarwal.

Applicants respectfully request, therefore, withdrawal of the rejection of claims 1-3, 5-7, 16, 17, 19, and 20 under 35 U.S.C. § 103(a).

CONCLUSION

In view of the foregoing, Applicants respectfully submit that the claims are allowable and that the present application is in condition for allowance. Entry of the above amendments, reconsideration of the application and a Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Michael P. Dunnam, at (215) 564-8962 to discuss the resolution of any remaining issues.

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